### SUBPART D CATEGORICAL EXCLUSION (CX) DETERMINATION RFO/CX16-93

Proposed Action: Site Characterization Activities at OUs 8, 10 and 13

Location: Rocky Flats Plant, Golden, CO

Proposed by: US Department of Energy, Rocky Flats Office

Description of the Proposed Action.

Site characterization work under provisions of the Comprehensive Environmental Response, Compensation and Liability Act and the Resource Conservation and Recovery Act are planned to take place at the Department of Energy's Rocky Flats Plant (RFP) for Operable Units (OUs) 8, 10 and 13 in two stages This work would begin in the spring of 1993 and continue at each of these OUs for several years

### OU8

OU 8, the 700 Area, consists of 24 individual hazardous substance sites (IHSSs) and is shown in Figure 1. All the IHSSs are located within the Protected Area of RFP except part of IHSS 172 which includes lands both in the Protected Area and in the Security Controlled Area.

Stage One site characterization at OU 8 would consist of a review of plant plans and site inspections to determine the presence or absence of drains around the perimeter of foundation footings of some buildings, a review of previous studies to identify those sections of the Plant's sanitary sewer system where leakage into or out of pipes may have occurred, taking of water and sediment samples from within the storm drain and/or sanitary sewer systems to assist in locating contaminant sources, and photographic inspections of certain sewer pipes

Stage Two would consist of field sampling and screening activities including

- 101 radiological surveys using a high-purity Germanium (HPGe) detector at larger sites or a sodium iodide scintillation detector (NaI probe) at smaller sites to detect gamma-emitting radionuclides. The HPGe detector is mounted on either a tripod or a vehicle and placed a set distance above the ground to measure gamma rays which originate from surface media as the detector is moved across a site. In paved areas, holes 4 to 8 inches in diameter may be cut in the pavement to allow the instrument to take measurements. The NaI probe is a hand held instrument that takes readings as it is carried across a site.
- 36 vertical soil profiles Vertical soil profile samples would be taken at depths of 0 to 2 inches, 2 to 4 inches and 4 to 6 inches using a hand-held instrument
- 122 surficial soil samples Samples would be taken on a grid layout with hand-held instruments. In paved areas, soil samples could include samples of the pavement or a small hole may be cut in the pavement, the underlying base material removed, and the soil sample taken from the native soil. Surficial soil samples would generally be taken from the top 2 inches of native soil.

- 91 soil gas samples Soil gas samples would be collected using a vehicle with a hydraulic rig to drive the collecting probe five feet into the ground. Probes are typically about one-inch in diameter. Where the collection point has a paved surface, a small hole would be cut through the pavement. Where vehicle access is not possible, collection probes would be driven by hand. Soil gas surveys would be conducted on a grid system, often 20- and 40-foot triangular grids, depending on the IHSS.
- Tank and pipeline inspections Activities would include inspection of above-ground piping or other ancillary structures, pressure testing and residue sampling of tanks, drain systems and pipelines
- Runoff water and sediment sampling at storm sewer outfalls, under-drain trunk lines, above confluence points between two open drainageways and within open drainageways Individual water and sediment sample sizes would be on the order of a few pints or pounds of medium

### OU 10

OU 10, Other Outside Closures, consists of 15 IHSSs that are distributed throughout the developed area of the Plant and adjacent areas of the Buffer Zone Locations of the 15 IHSSs comprising OU 10 are shown in Figure 11 Some of the areas to be investigated are under pavement. The activities listed below would be undertaken in the same manner as described for OU 8 Locations of the Stage One and Two work are shown in Figures 12 through 32, and it would include

- 169 radiological surveys
- 542 soil gas surveys
- 21 vertical soil profiles
- 184 Surficial soil samples
- inspection of both above-ground and underground tanks and associated valves, fittings and pipelines. This activity would require excavation to reach some of the sites to be inspected. Depth of the excavations would be determined by the depth of the tanks and pipes.
- 3 samples of tank residues by removing small amounts of any liquids in the tanks

The types and locations of Stage Two work at OU 10 would be determined by the results of Stage One Soil borings would be made within the IHSSs at sites identified as contaminated by Stage One soil gas surveys as well as at sites identified by stained soil or stressed vegetation. Soil borings would be obtained using standard rotary drill rigs and are expected to be confined to the vadose (unsaturated) zone. Finally, Stage Two would include the taking of approximately 10 small pavement samples at each IHSS that has been paved.

### OU 13

OU 13, the 100 Area, is located in the western half of the developed area of RFP southeast of

Building 371 as shown in Figure 33 All the 15 IHSSs in OU 13 except the northeast corner of IHSS 117 1 and a portion of IHSS 197 are located outside the Protected Area but in the developed area of the Plant. Stage One and Two characterization activities in OU 13 would be carried out in the same manner as described for OUs 8 and 10 The locations of these activities are shown for each IHSS in figures 35 through 44 and would include

- visual inspections of the ground surface to identify areas for further investigation
- 666 surface radiological surveys
- 589 soil gas surveys
- 4 soil borings
- 54 surficial soil sampling
- 30 vertical soil profile sampling
- 20 groundwater well and piezometer samples from existing wells

Areas identified in Stage One as being of particular interest or requiring fuller delineation would be further investigated in Stage Two Stage Two site characterization activities would consist of drilling a minimum of two or three boreholes within each IHSS where contamination was found in Stage One. For those IHSSs where no contamination was detected during Stage One, one borehole would be drilled to confirm the absence of contamination at the point most likely to have been contaminated based on the history of the site. For IHSSs where contamination is detected during Stage One, boreholes would be drilled at the location of the highest level of contamination detected by the surface radiological survey and by the soil gas survey within the IHSS.

All Stages Two boreholes would be drilled 6 feet into weathered bedrock so the total depth of a given well would depend on the depth to bedrock. If the weathered bedrock in any borehole is sandstone, the boreholes would be drilled through the sandstone at least 6 feet into the next bedrock horizon. Surface scrapes would be taken at the location of each borehole prior to drilling. At locations where the drill site is paved, soil samples would be taken from approximately 4-inches below any fill material under the pavement. Soil/geologic and water samples may be taken at any boreholes. All boreholes except those identified for completion as monitoring wells would be plugged and abandoned after sampling. Locations of some boreholes may be adjusted slightly in the field to avoid underground or above-ground obstacles.

None of the characterization activities would take place within a floodplain, wetland or other environmentally sensitive area. Cost of site characterization activities at OUs 8, 10 and 13 is estimated to exceed \$20 million.

### Categorical Exclusions to be applied:

B3 1 Site characterization and environmental monitoring, including siting, construction, operation, and dismantlement or closing (abandonment) of characterization and monitoring devices and siting, construction, and operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis. Activities covered include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. Specific activities

include, but are not limited to (a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, and radar), geochemical, and engineering surveys and mapping, including the establishment of survey marks,(b) Installation and operation of field instruments, such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools;(c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells,(d) Aquifer response testing,(e) Installation and operation of ambient air monitoring equipment,(f) Sampling and characterization of water, soil, rock, or contaminants;(g) Sampling and characterization of water effluents, air emissions, or solid waste streams,(h) Installation and operation of meteorological towers and associated activities, including assessment of potential wind energy resources,(i) Sampling of flora or fauna, and(j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7

## DOE NEPA REGULATIONS SUBPART D CATEGORICAL EXCLUSION DETERMINATION - RFO/CX16-93 Site Characterization Activities at OUs 8, 10 and 13

I have determined that the proposed action meets the requirements for a categorical exclusion as defined in the Subpart D of 10 CFR 1021 Therefore, I approve the categorical exclusion of the proposed action from further NEPA review and documentation

Date <u>5/10/93</u>	Signature (	Alvin H Pauole Acting Manager, Rocky Flats Office
Project Sponsor		
Date 4/29/93	Signature Title	Richard J (Schassburger Acting Director, Environmental Restoration Division

I have reviewed this determination and find that a categorical exclusion is the appropriate level of NEPA documentation

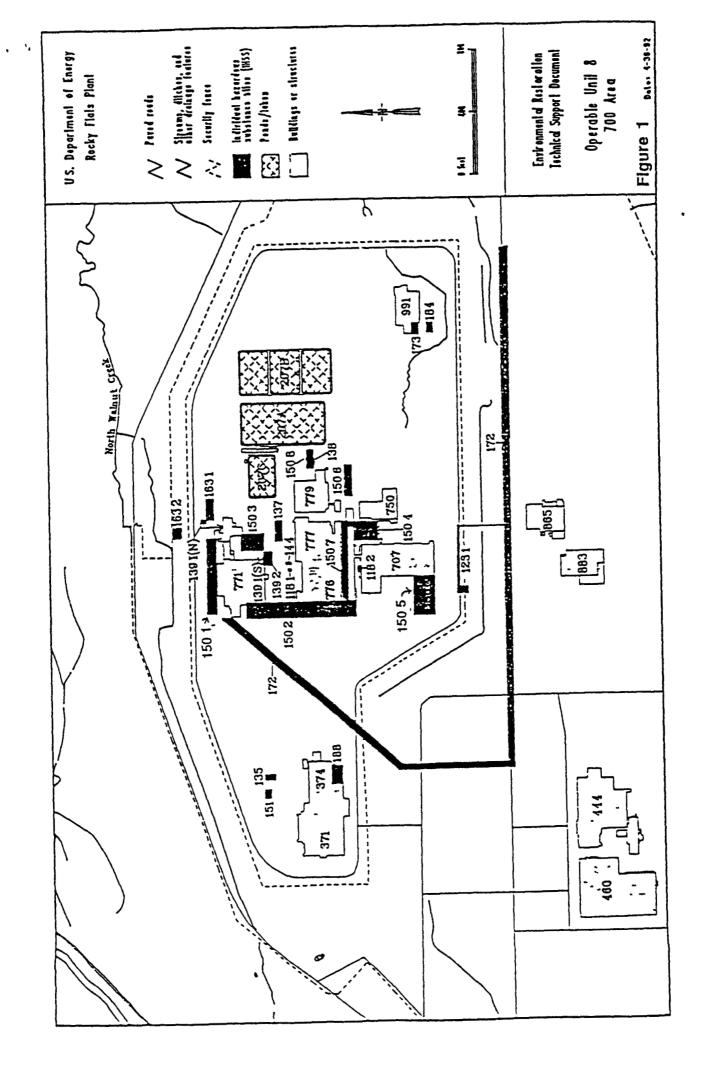
Date April 27, 1993

Signature

Title

NEPA Compliance Officer

ADS number 1006A, 1008A, 1231 (EM) EC 93-012

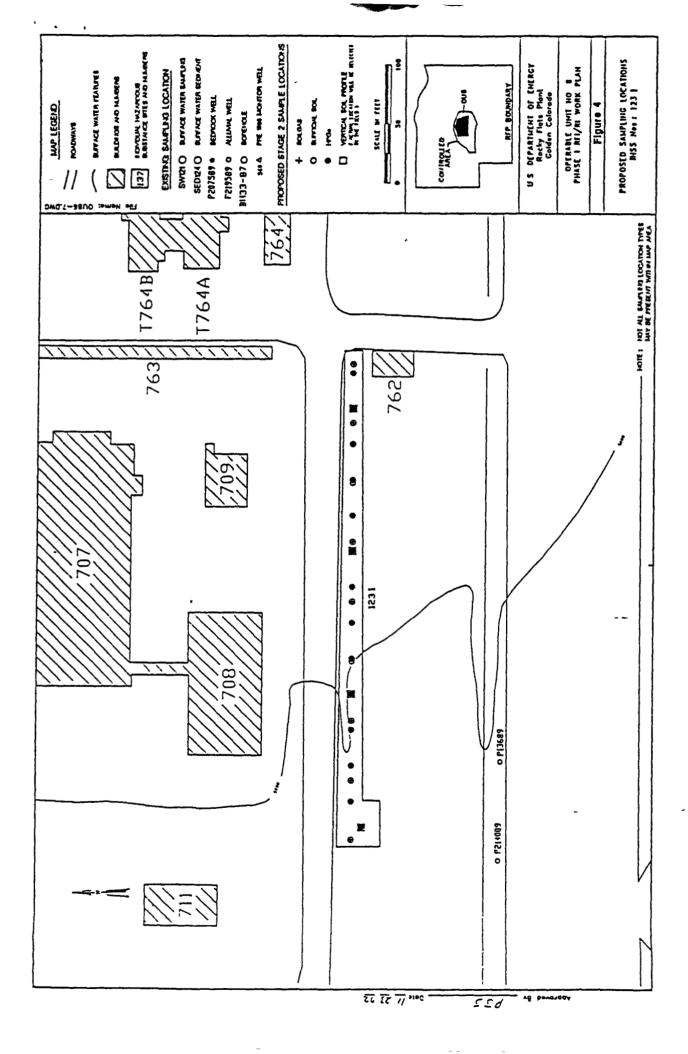


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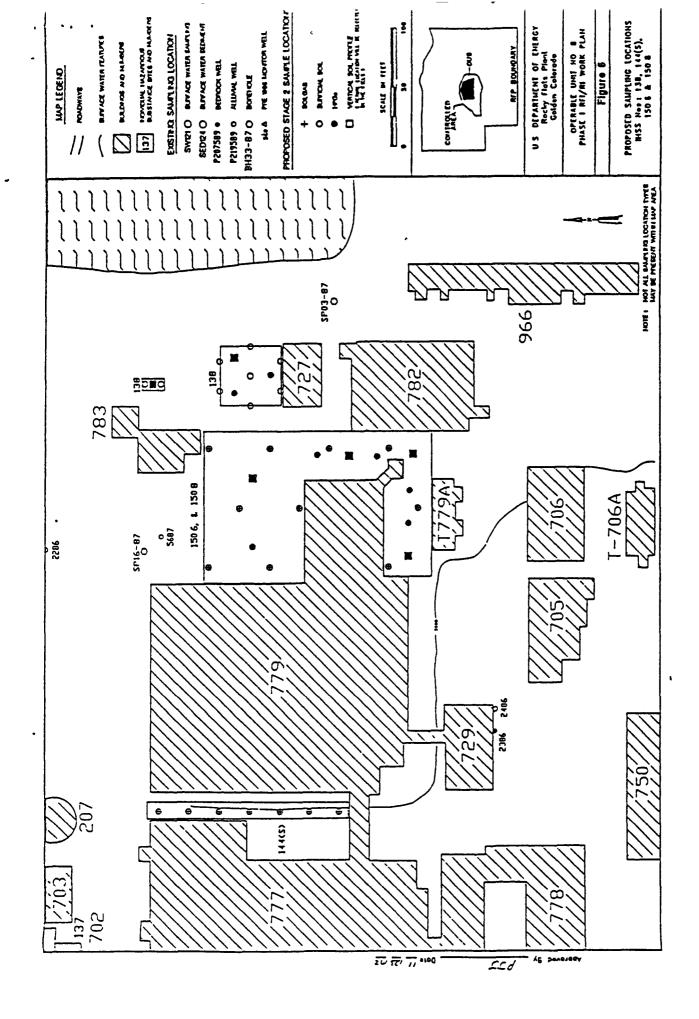
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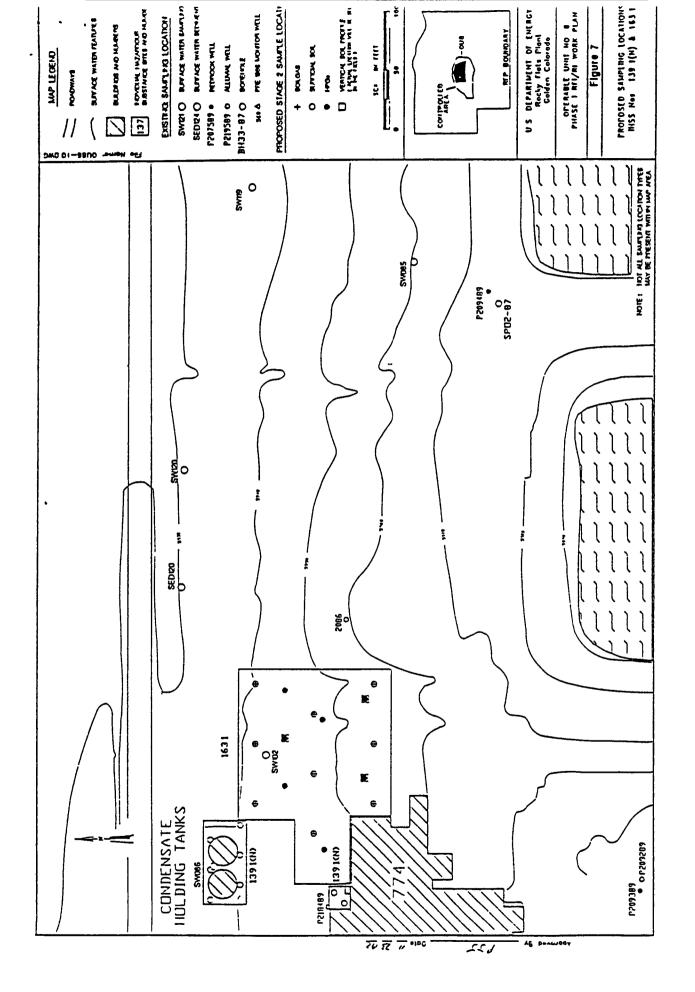


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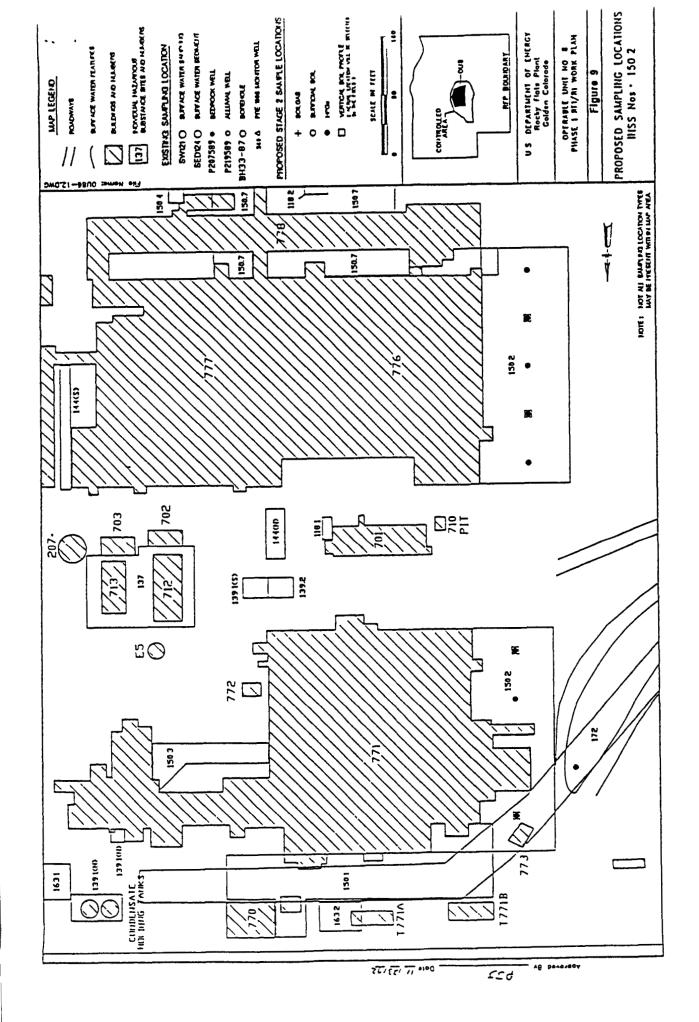
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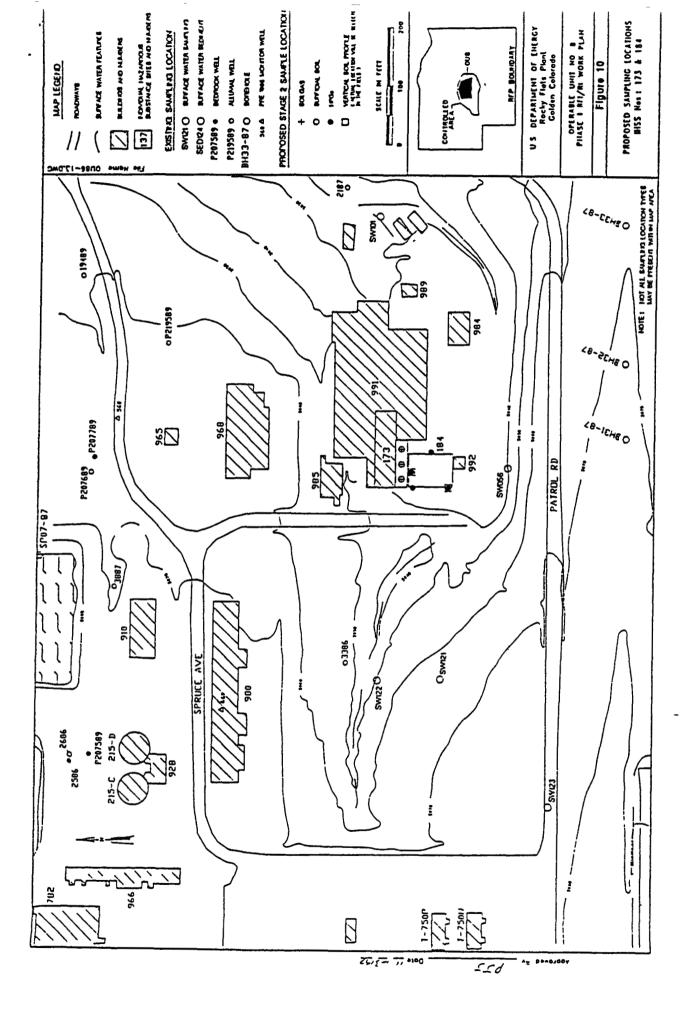
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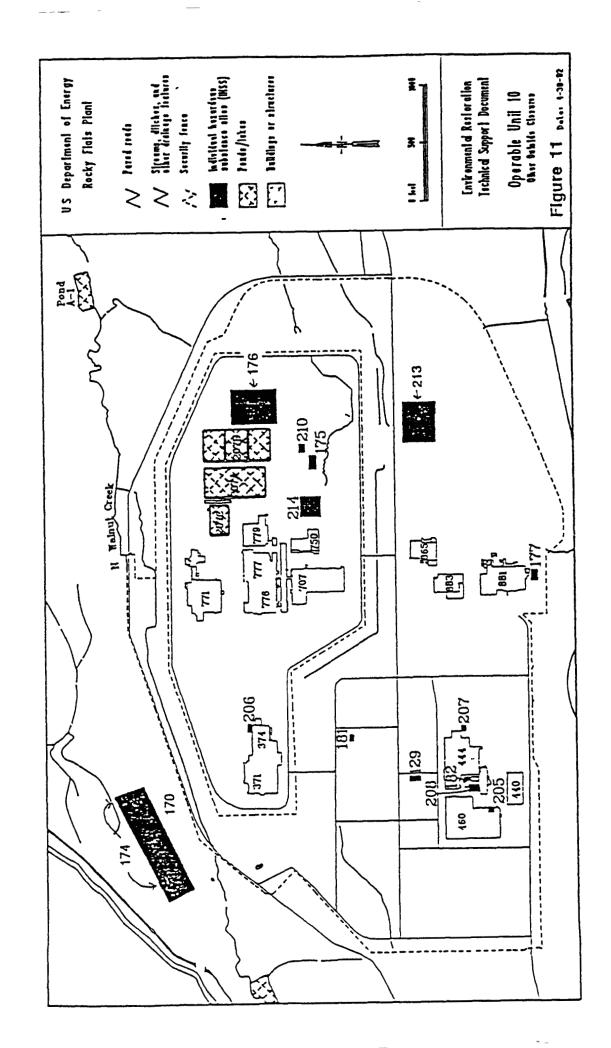


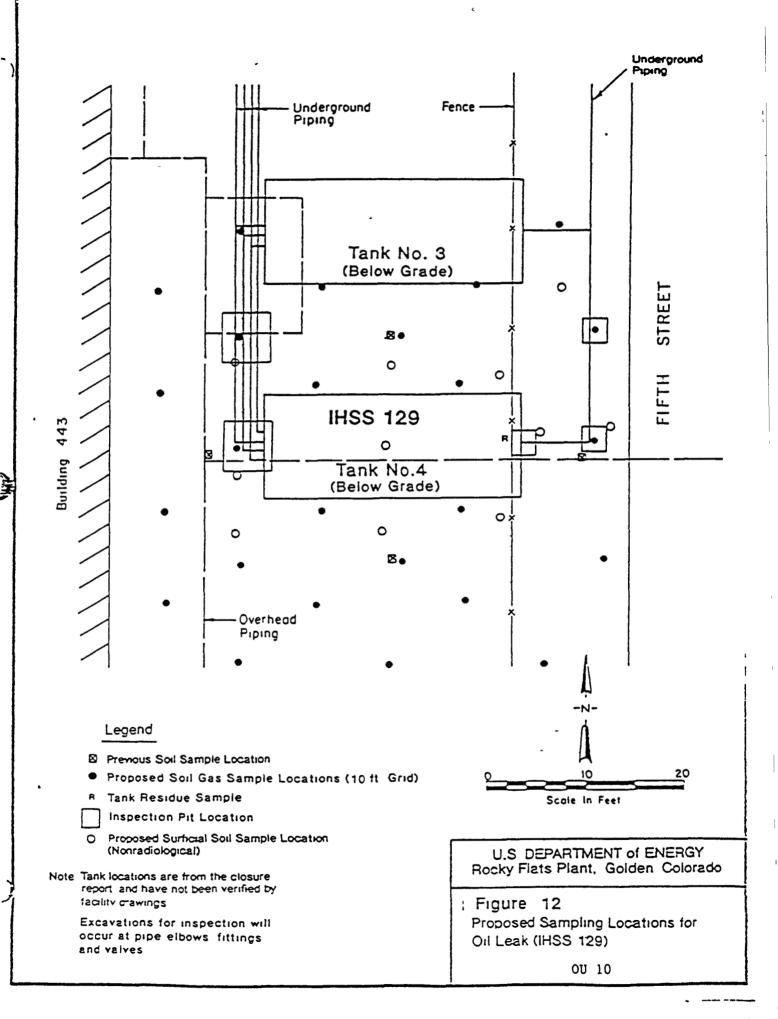
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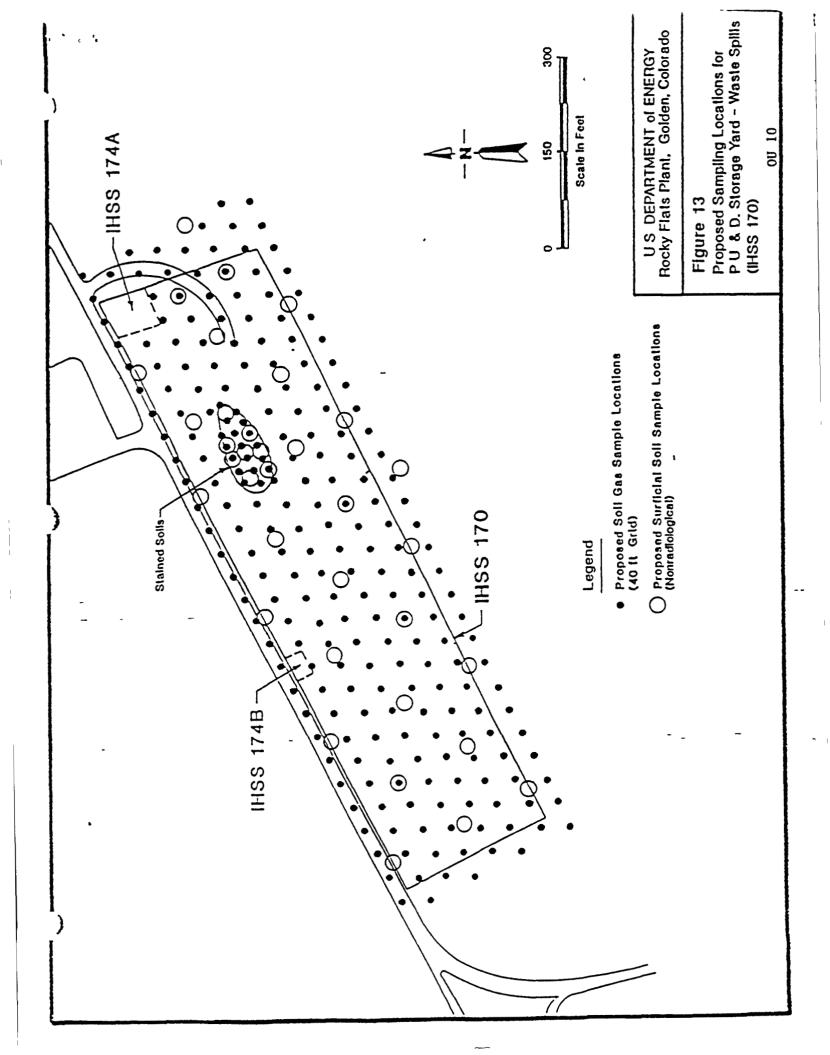


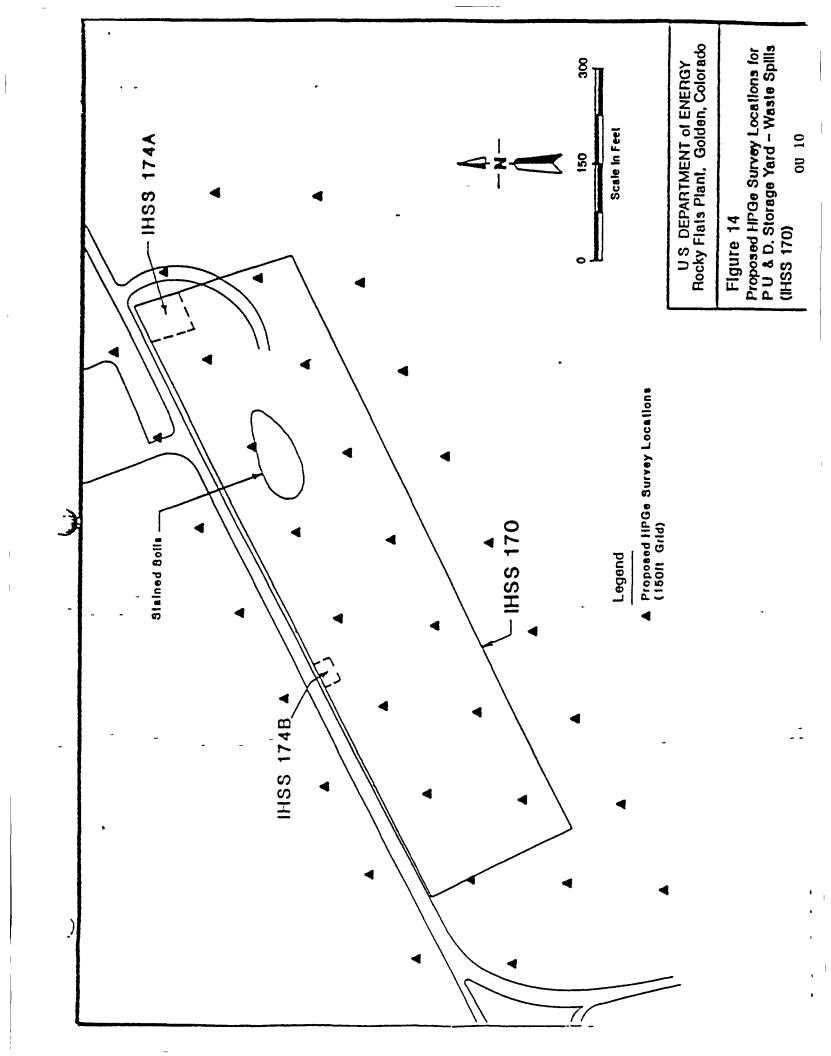


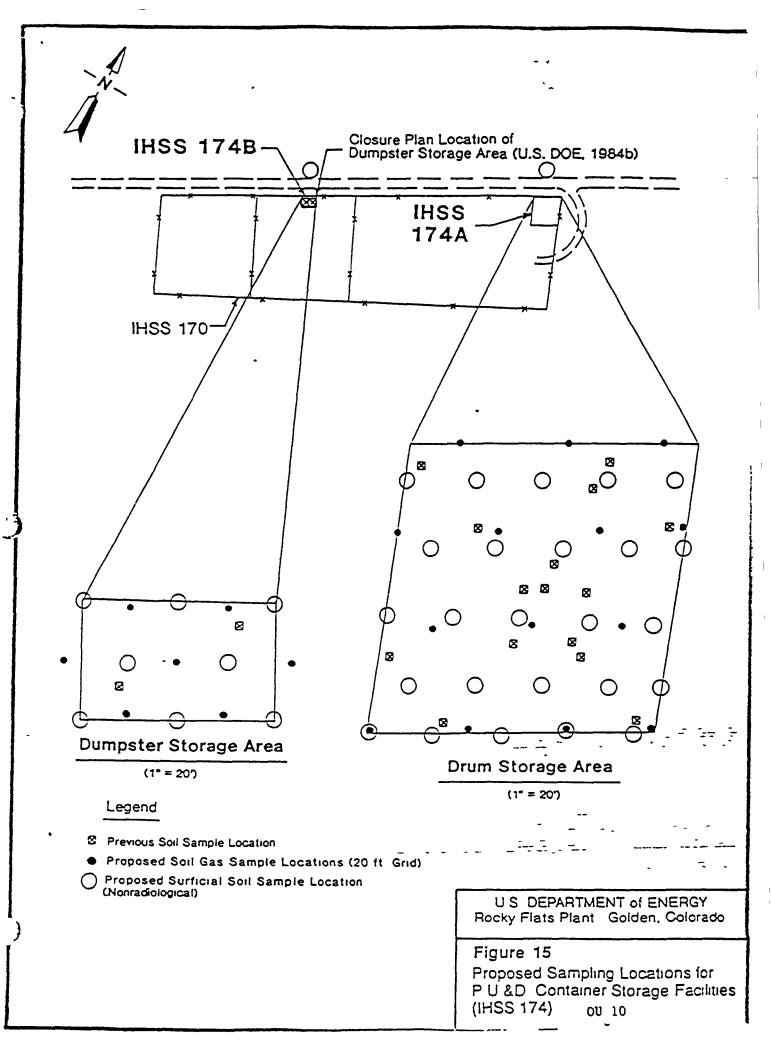
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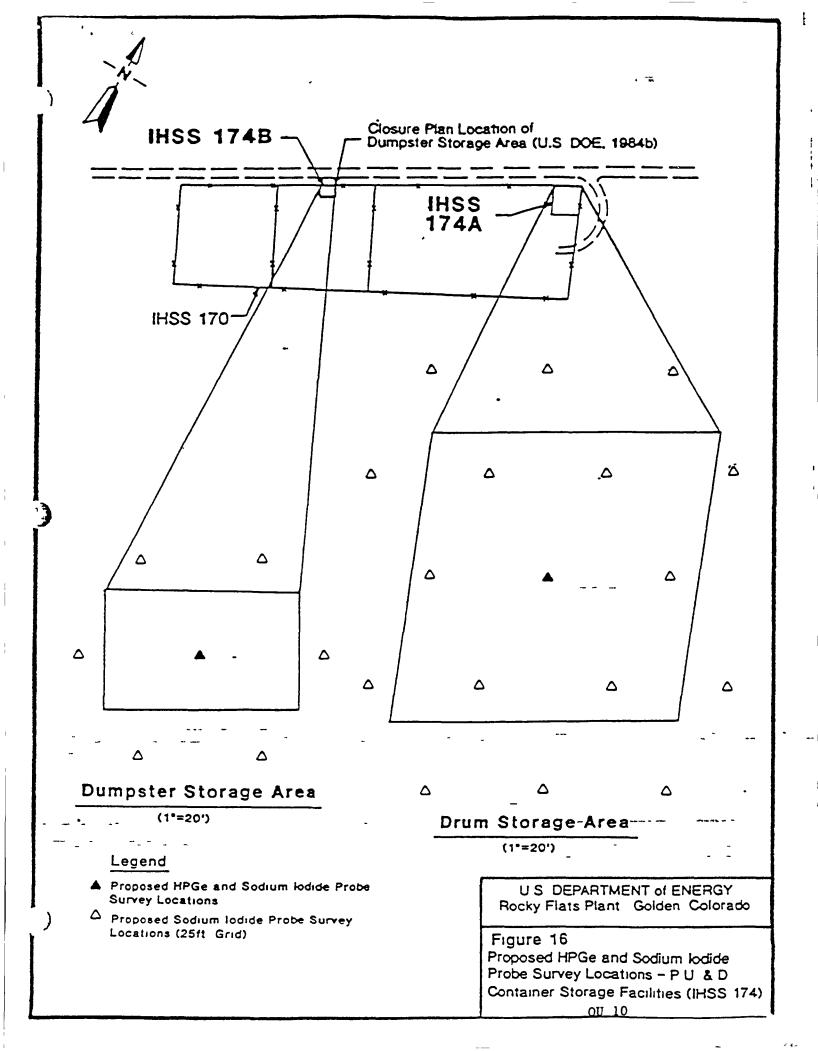


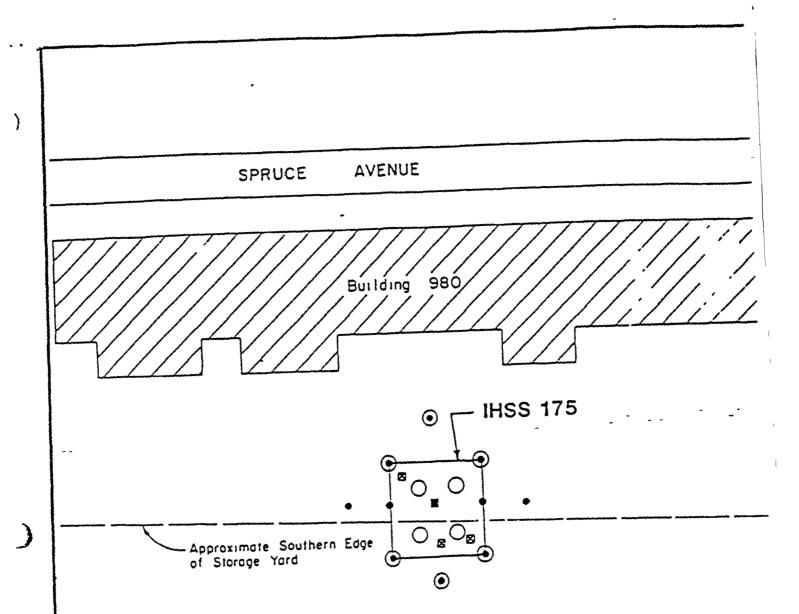




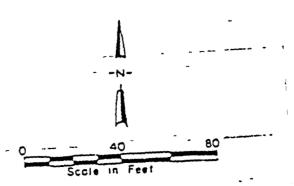








- B Previous Soil Sample Location
- Proposed Soil Gas and Previous Soil Sample Location
- Proposed Soil Gas Sample Locations (20 ft Grid)
- Proposed Surficial Soil Sample Locations (Nonradiological)



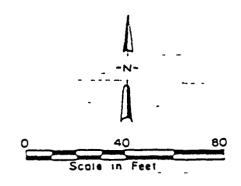
U.S. DEPARTMENT of ENERGY Pocky Flats Plant Golden Colorado

Figure 17
Proposed Sampling Locations for S & W Building 980 Container Storage Facility (IHSS 175) 00 10

# SPRUCE AVENUE Building 980 IHSS 175 Approximate Southern Edge of Storage Yard

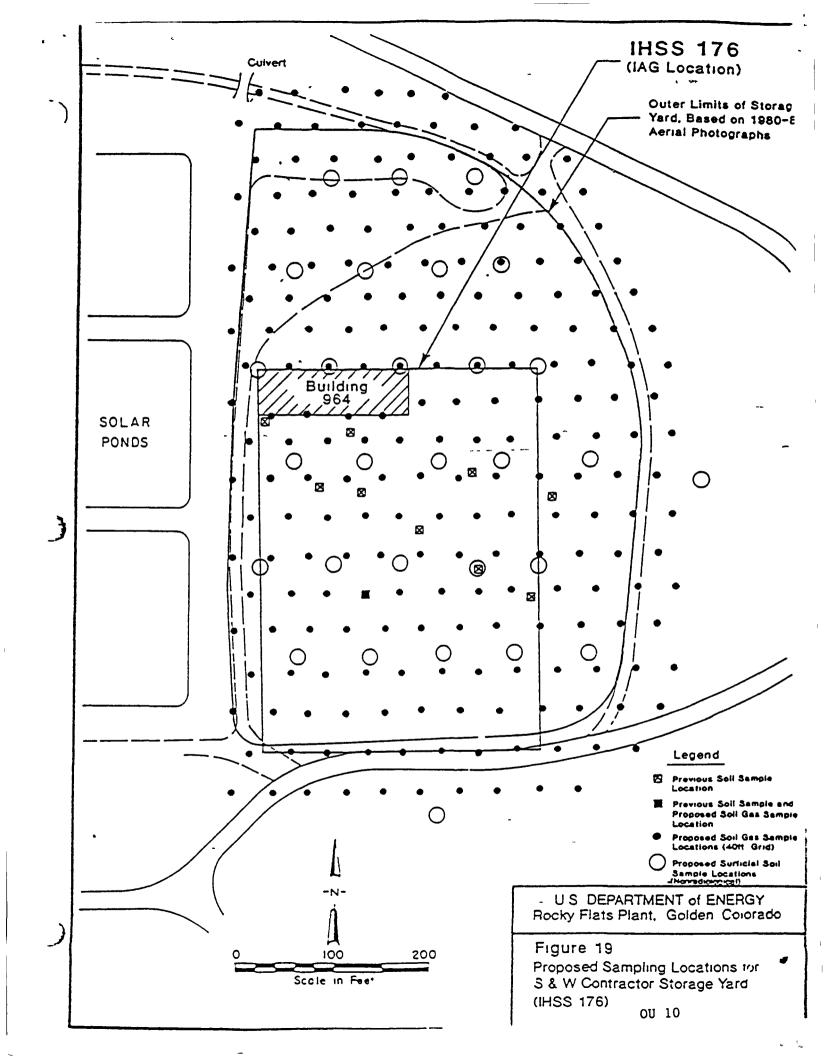
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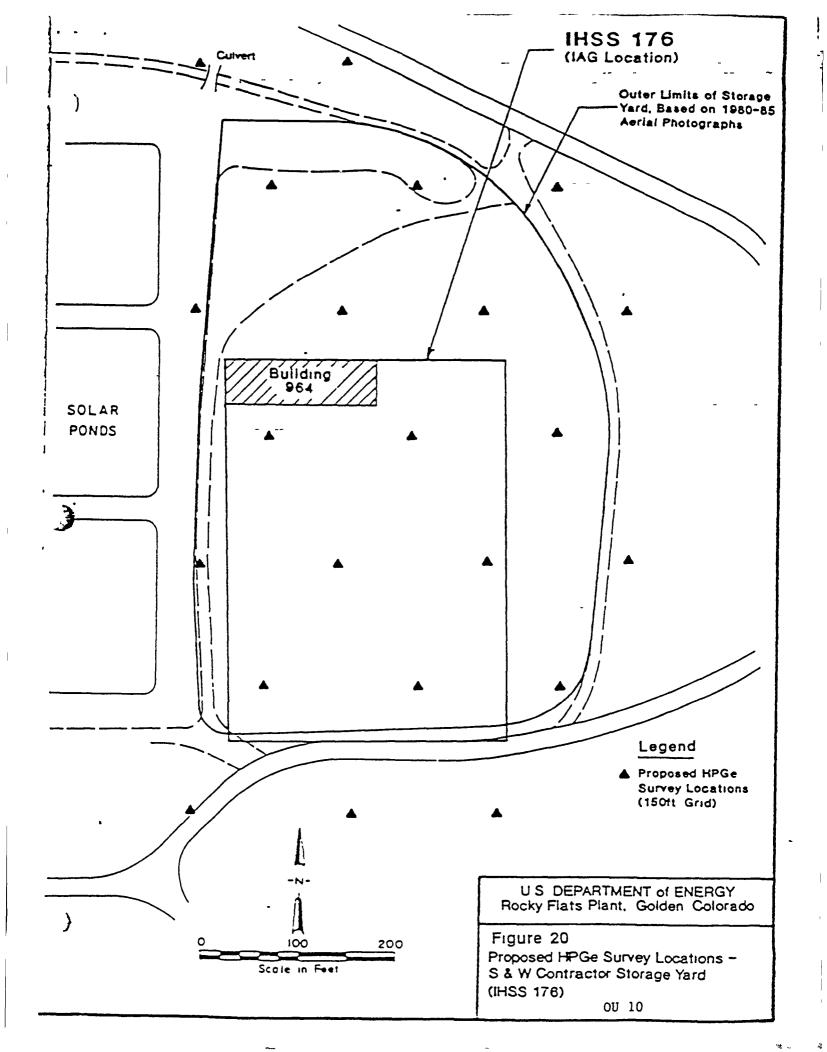
- ▲ Proposed HPGe and Sodium todide Probe Survey Locations
- △ Proposed Sodium Iodide Probe Survey Locations (25ft Grid)

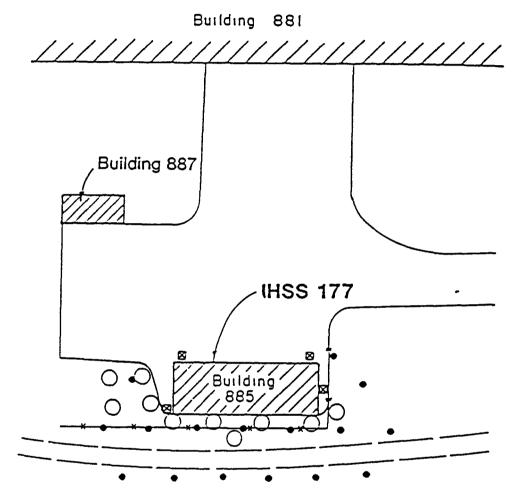


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Figure 18
Proposed HPGe and Sodium Iodide
Probe Survey Locations - S & W Building
980 Container Storage Facility
(IHSS 175)
00 10

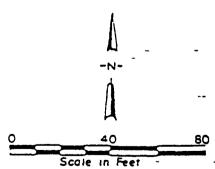






- Previous Soil Sample Location
- Proposed Soil Gas Sample Locations (20 ft Grid)
- Proposed Surficial Soil Sample Locations (Nonradiological)

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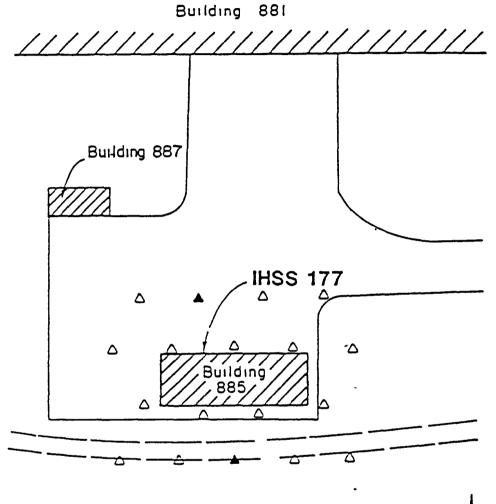


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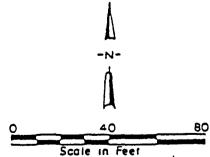
!Figure 21

Proposed Sampling Locations for Building 885 Drum Storage Area (IHSS 177)

OU 10

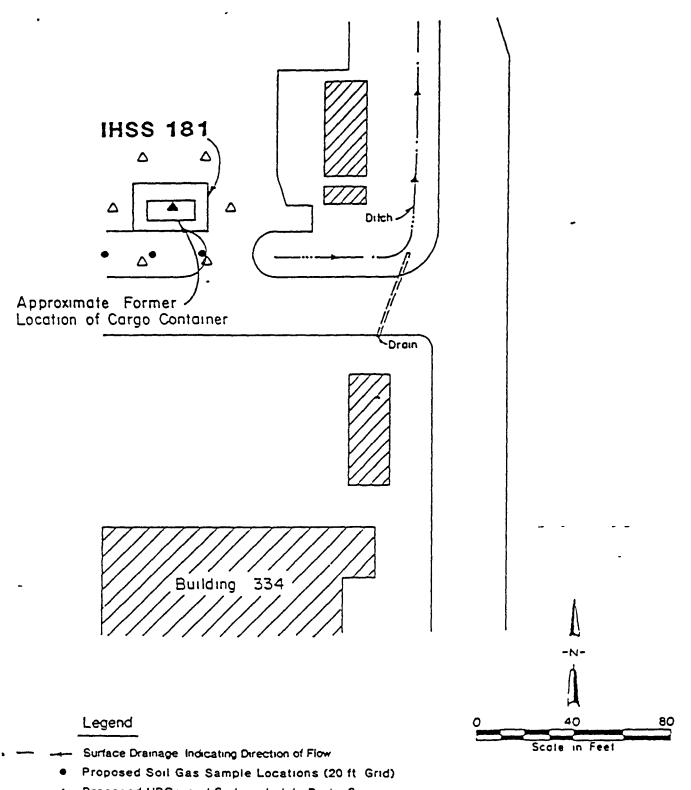


- ▲ Proposed HPGe and Sodium Iodide Probe Survey Locations
- △ Proposed Sodium Iodide Probe Survey Locations (25ft Grid)



US DEPARTMENT of ENERGY Rocky Flats Plant, Golden, Colorado

Figure 22
Proposed HPGe and Sodium lodide
Probe Survey Locations – Building
885 Drum Storage Area (IHSS 177)
00 10

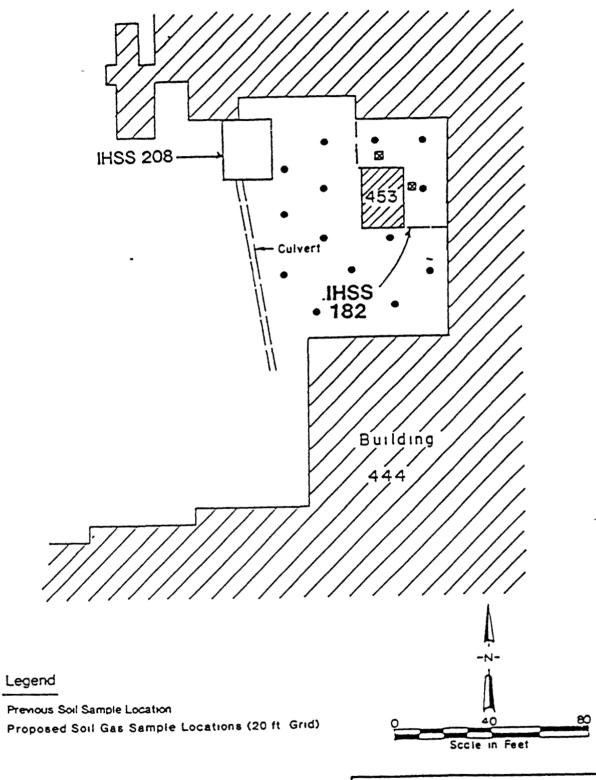


- ▲ Proposed HPGe and Sodium Iodide Probe Survey Locations
- △ Proposed Sodium lodide Probe Survey Locations (25ft Grid)

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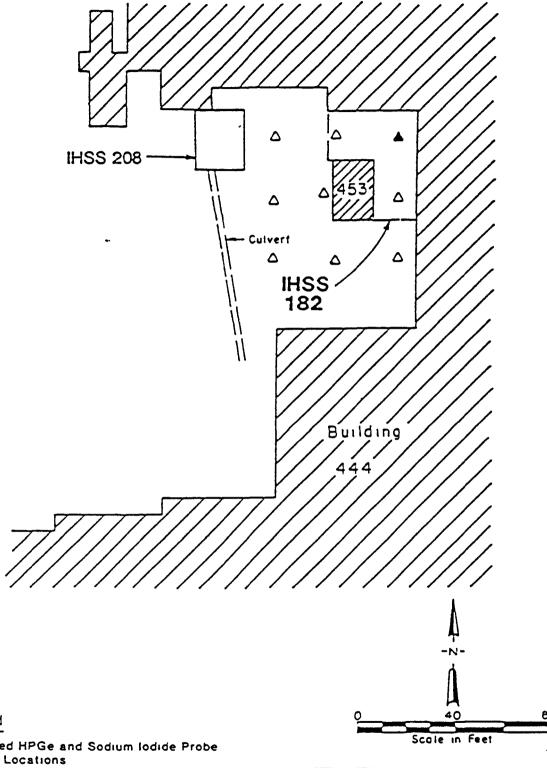
Figure 23
Proposed Sampling Locations for
Building 334 Cargo Container Area
(IHSS 181)

OU 10



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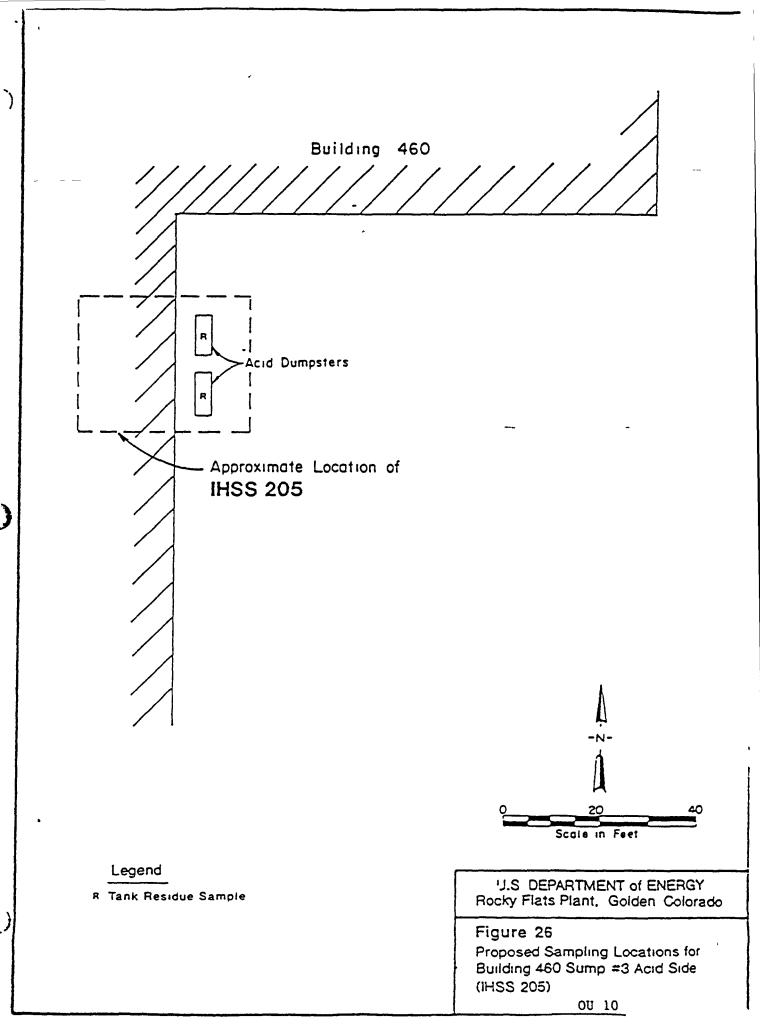
# Figure 24 Proposed Sampling Locations for Building 444/453 Drum Storage Area (IHSS 182) 00 10

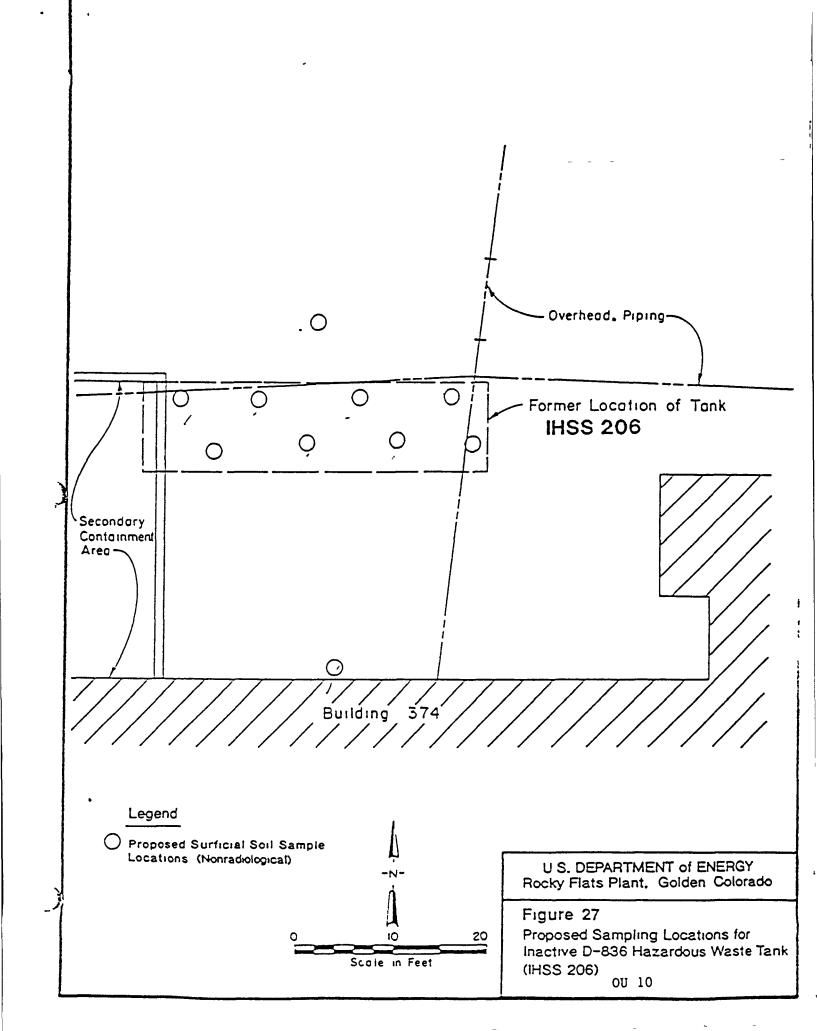


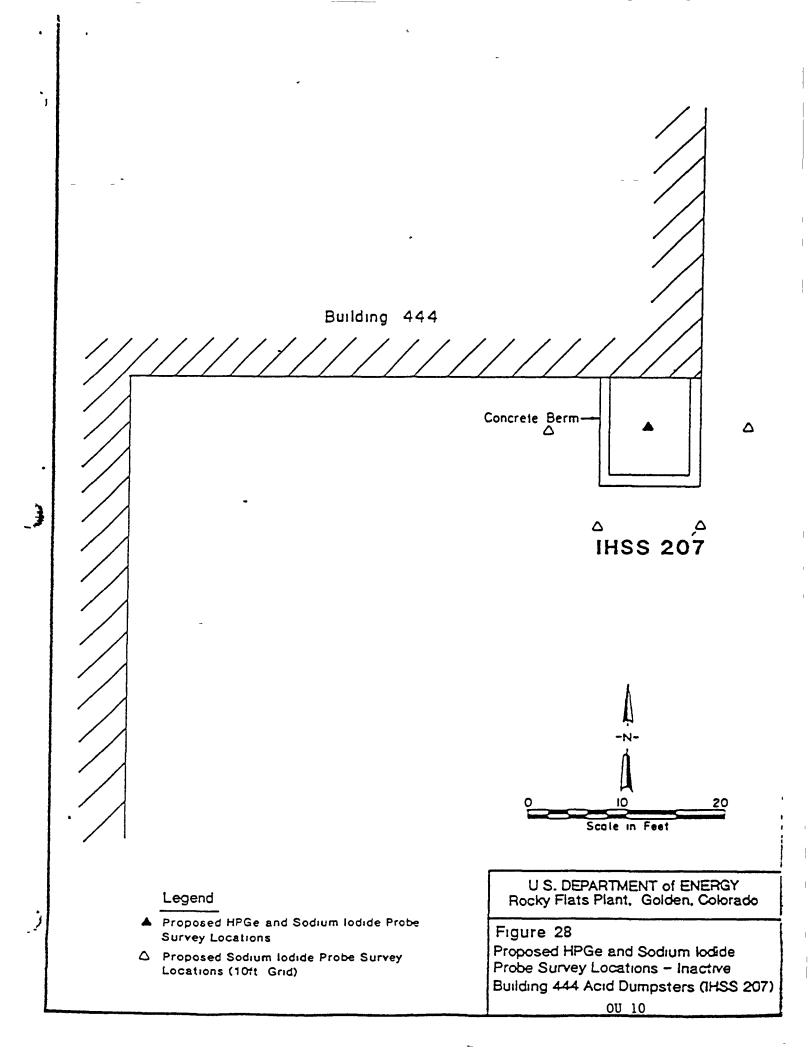
- Proposed HPGe and Sodium lodide Probe Survey Locations
- △ Proposed Sodium Iodide Probe Survey Locations (25ft Grid)

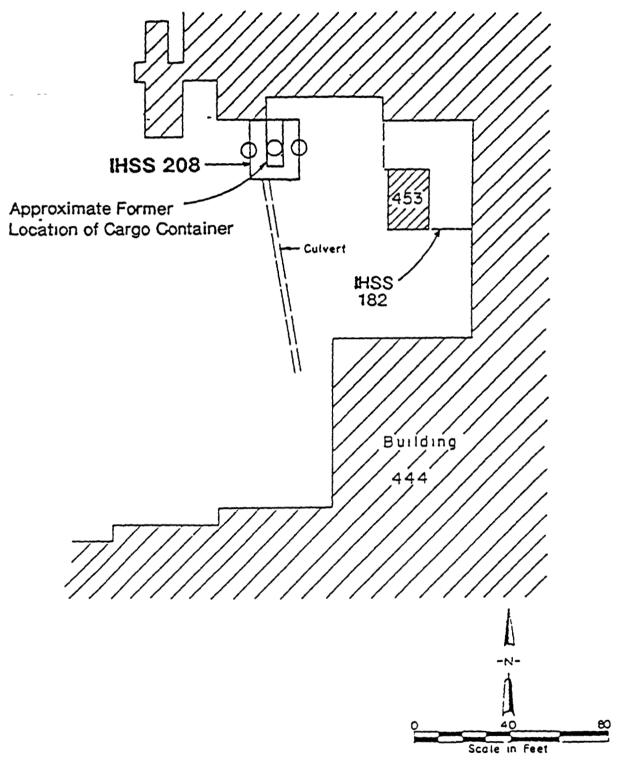
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Figure 25 Proposed HPGe and Sodium lodide Probe Survey Locations - Building 444/453 Drum Storage Area (IHSS 182) OU 10









Proposed Surficial Soll Sample Locations (Nonradiological)

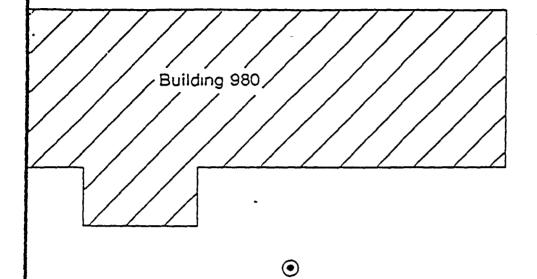
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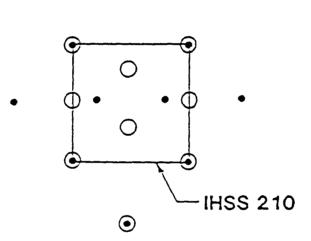
Figure 29

Proposed Sampling Locations for Inactive 444/447 Hazardous Waste Storage Area (IHSS 208)

OU 10

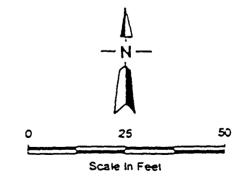
### Spruce Avenue





### Legend

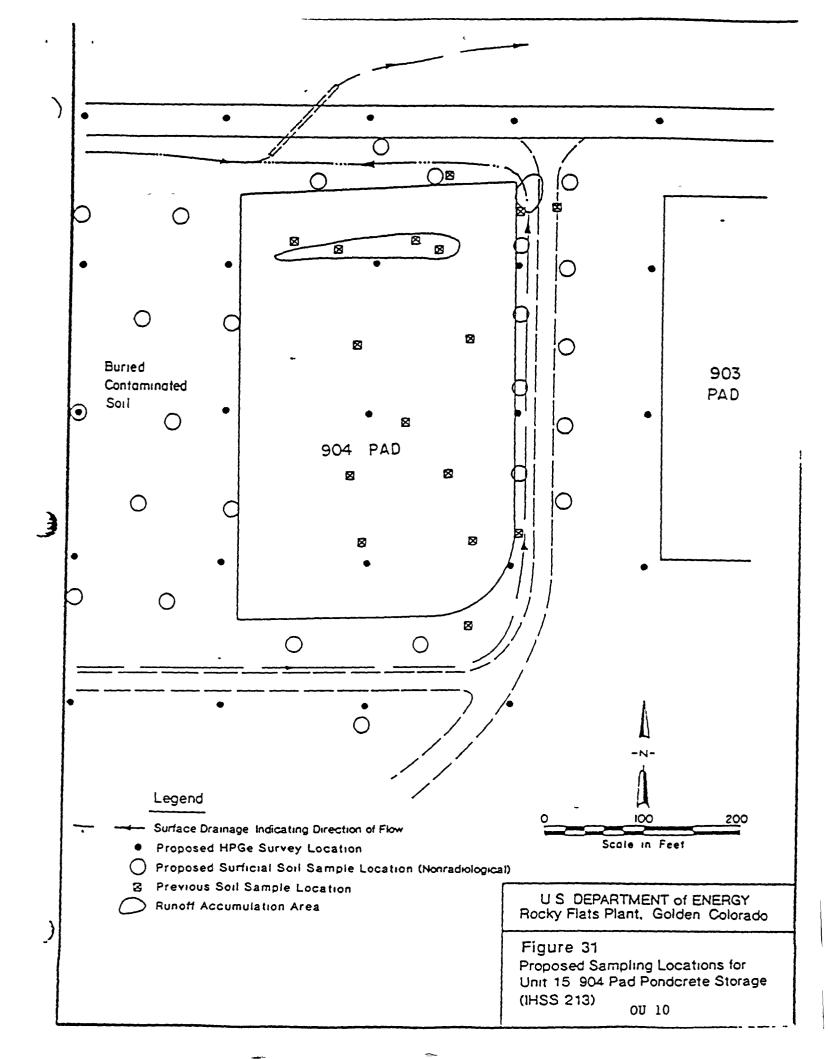
- Proposed Soil Gas Sample Locations (20 ft Grid)
- Proposed Surficial Soil Sample Locations (Nonradiological)



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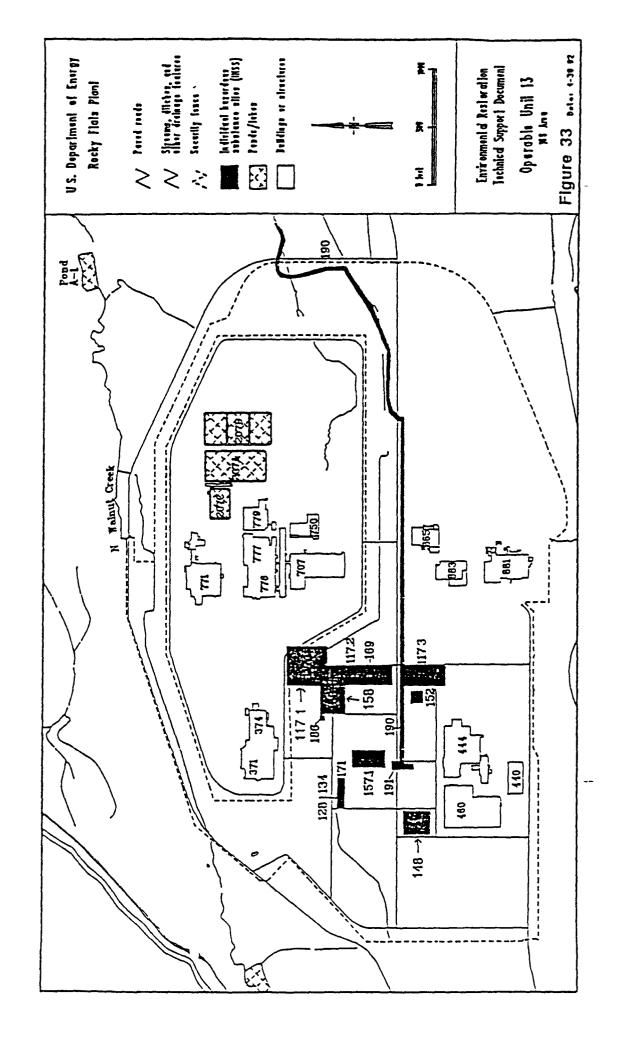
Figure 30
Proposed Sampling Locations for
Unit 16. Building 980 Cargo Container
(IHSS 210)

OU 10



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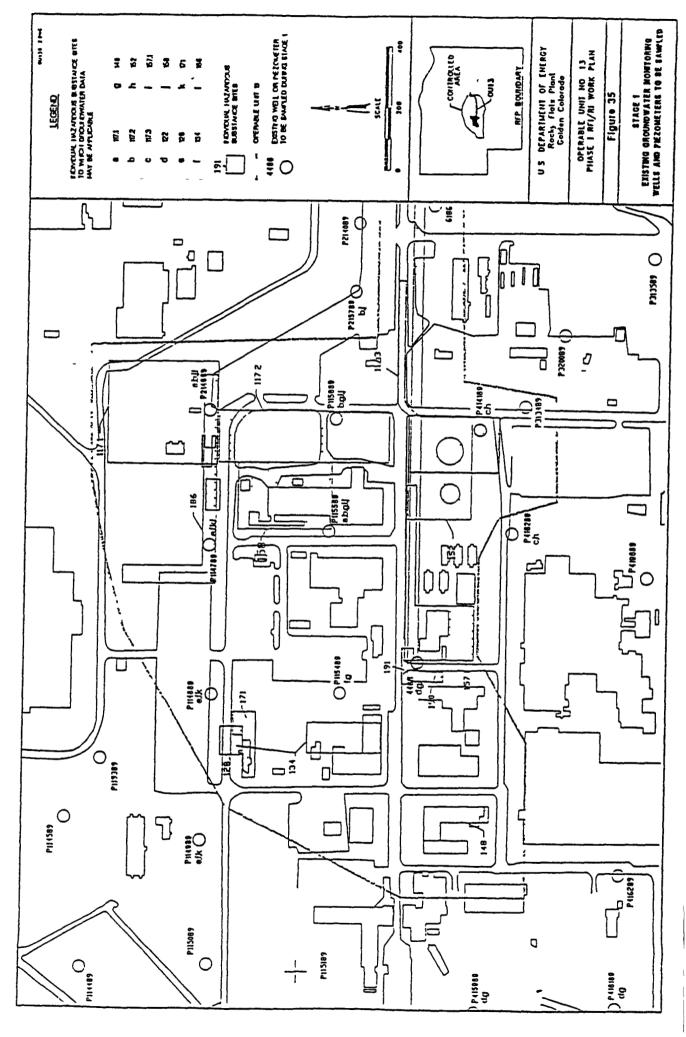


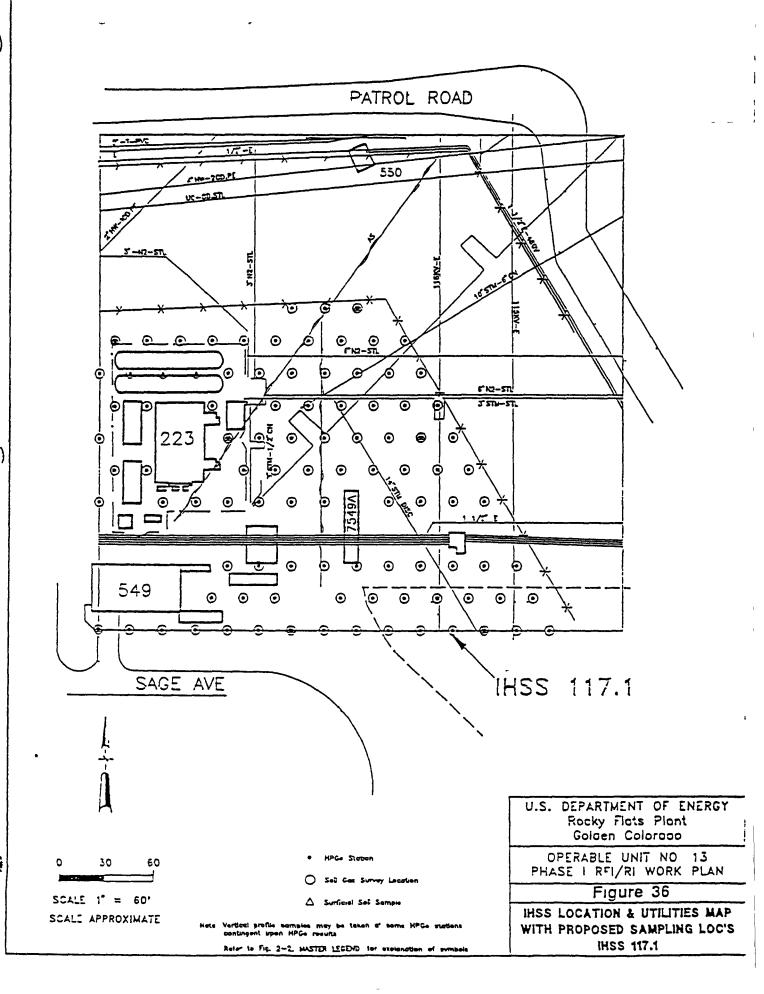
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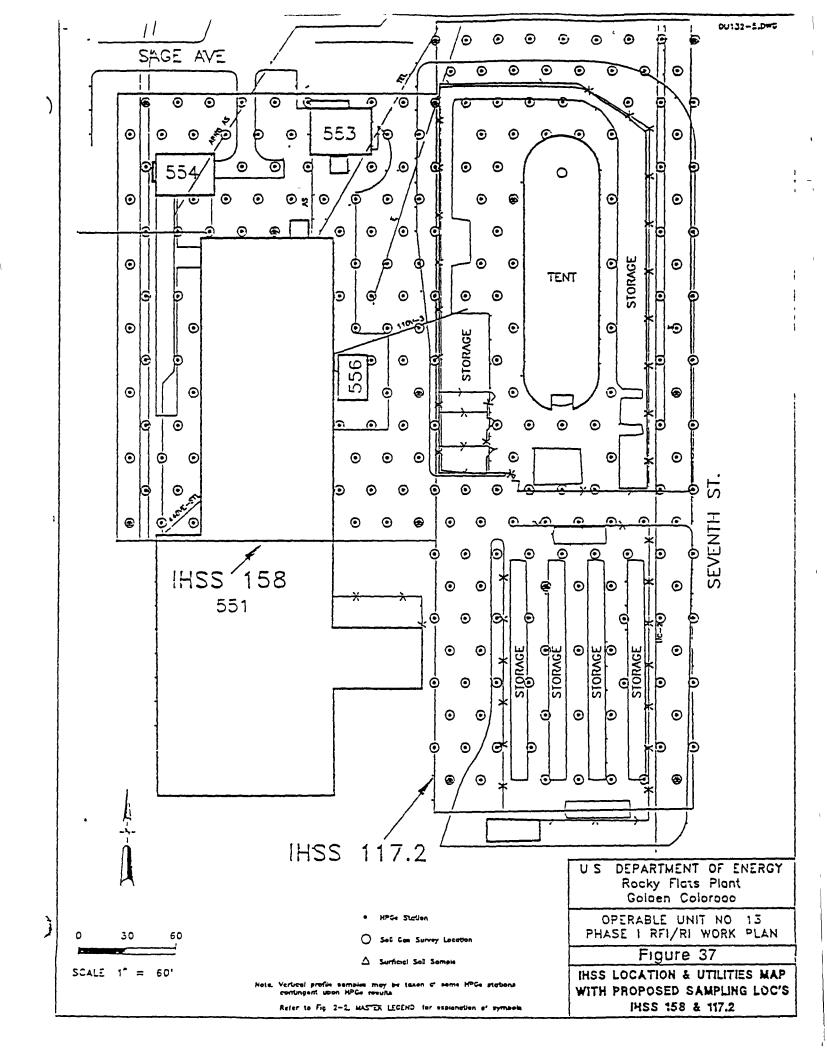
OPERABLE UNIT NO. 13 PHASE I RFI/RI WORK PLAN

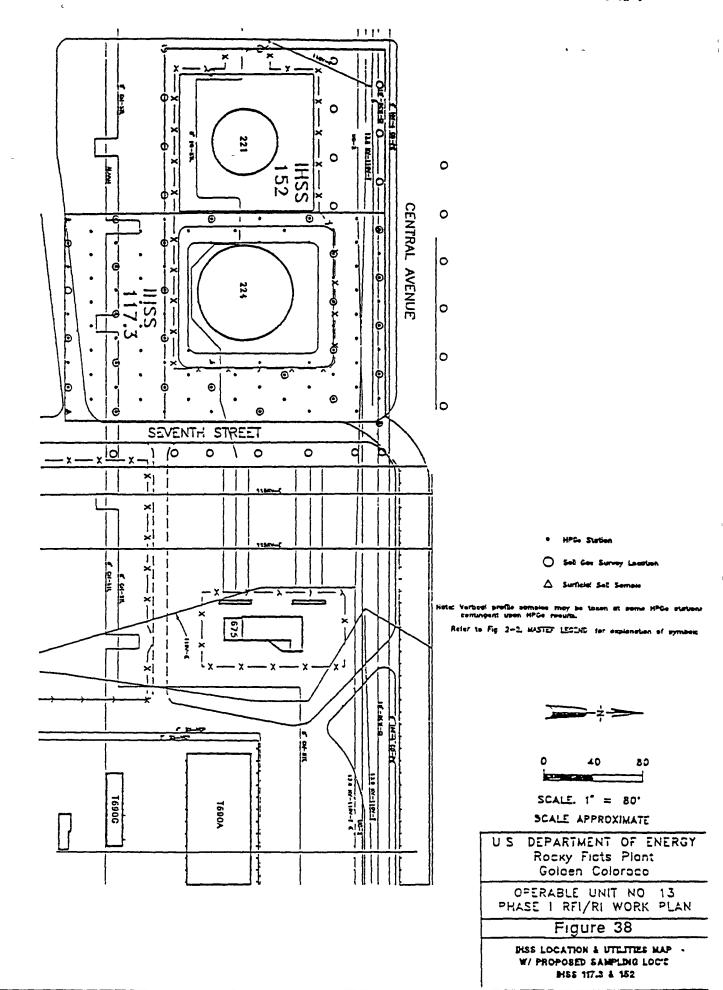
Figure 34

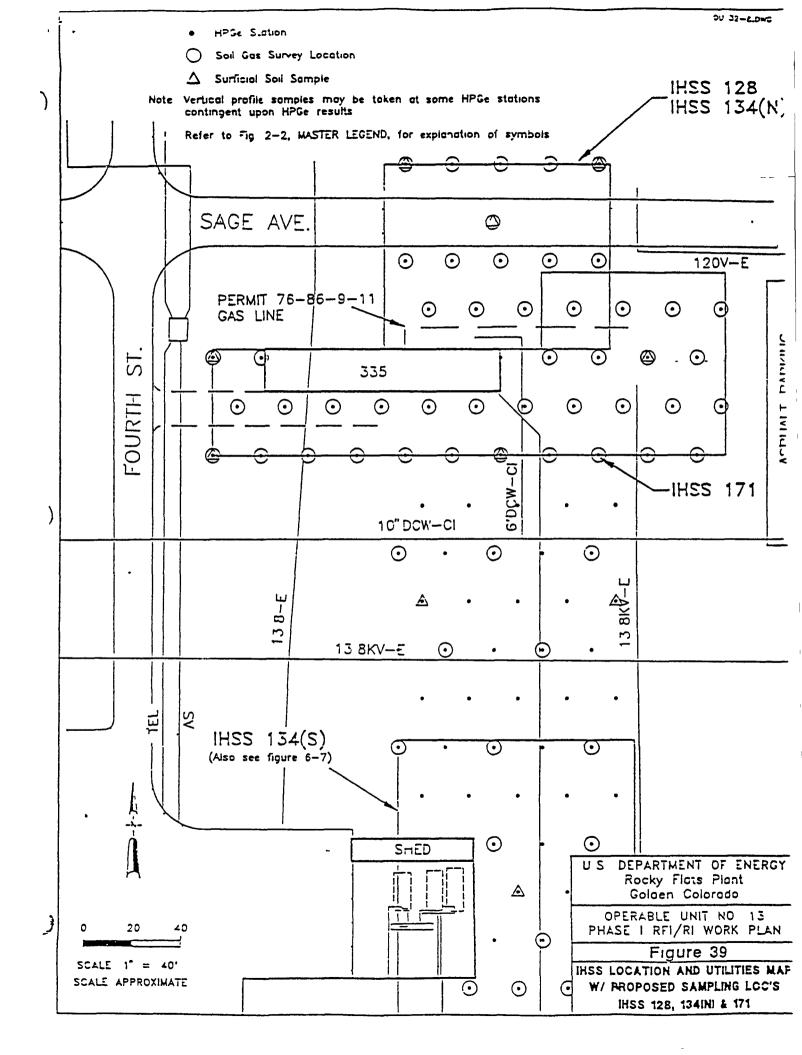
Master Legend for . OU 13 Maps

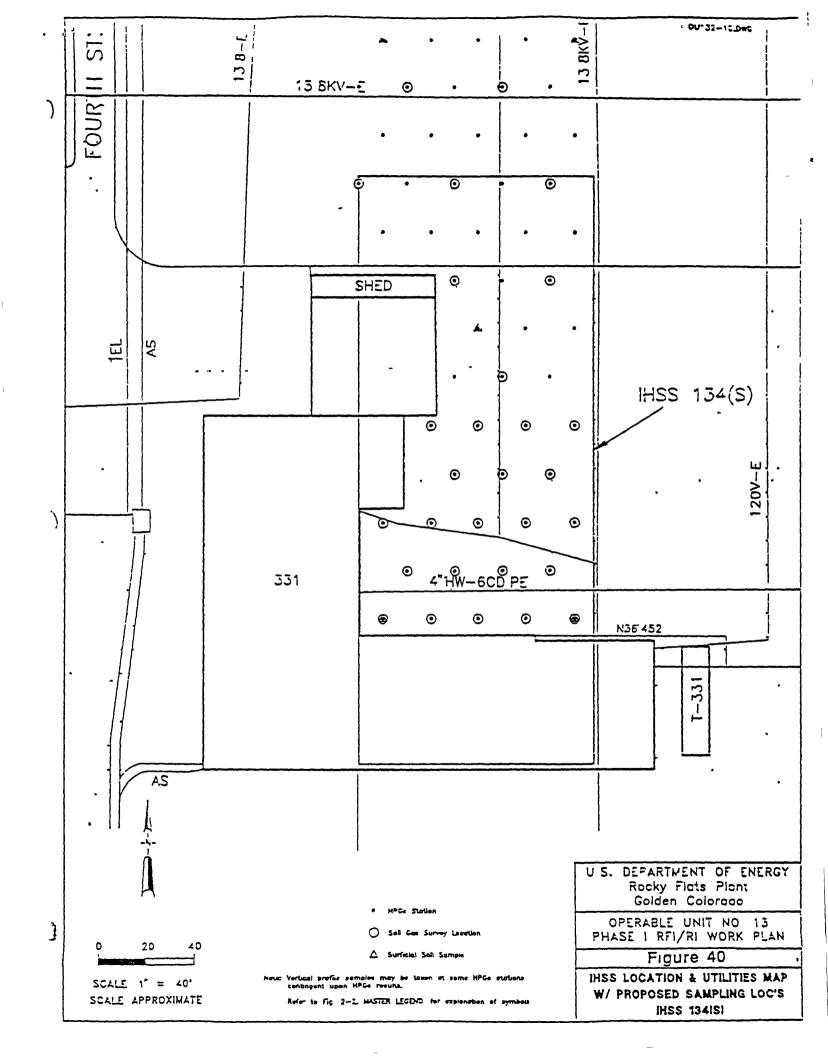




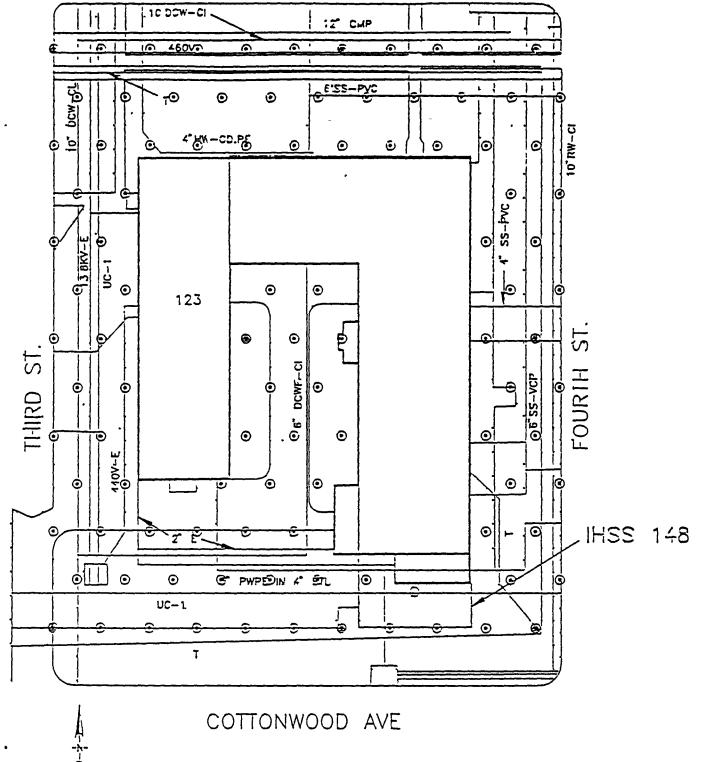








## CENTRAL AVENUE 10 DOW-CI.





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SCALE 1" = 40"

SCALE APPROXIMATE

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Refer to Fig. 2-2. MASTER LEGEND for explanation of evenants.

U.S. DEPARTMENT OF ENERGY

OPEPABLE UNIT NO 13 PHASE I RFI/RI WORK PLAN

Figure 41

IHSS LOCATION & UTILITIES MAR WITH PROPOSED SAMPLING LOC'S **IHSS 148** 

IHSS LOCATION & UTILITIES MAP WITH PROPOSED SAMPLING LOC'S IHSS 191 & 157.1

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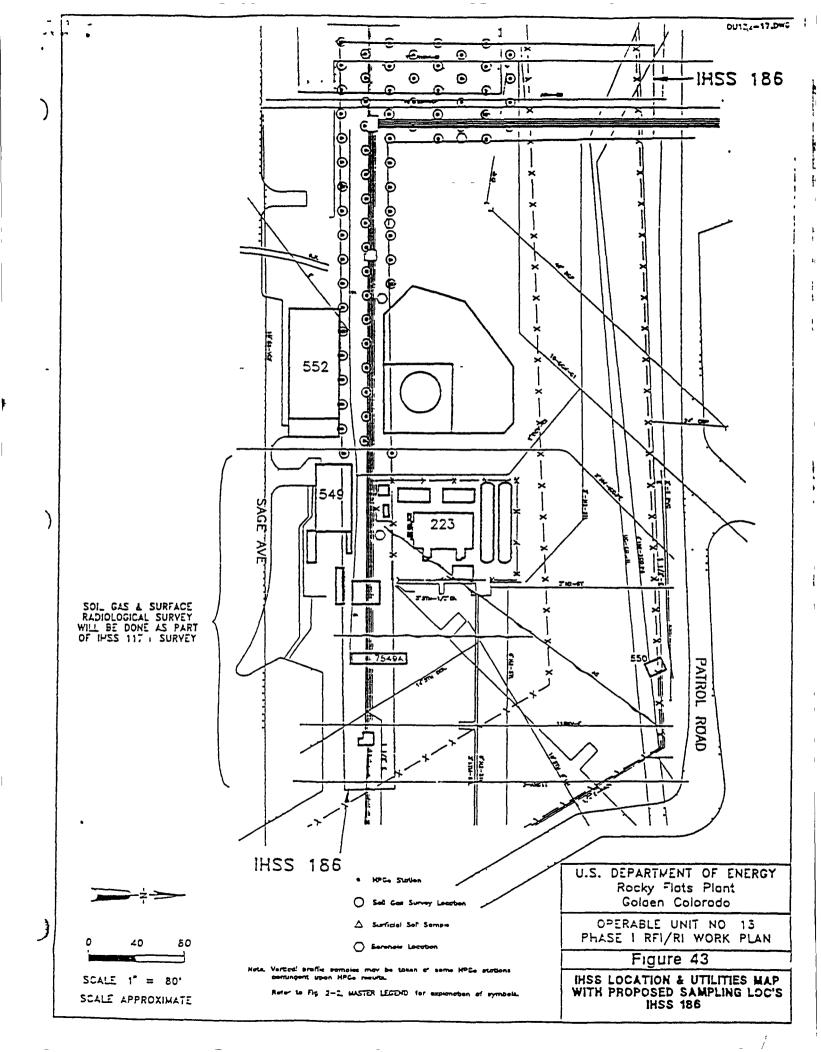
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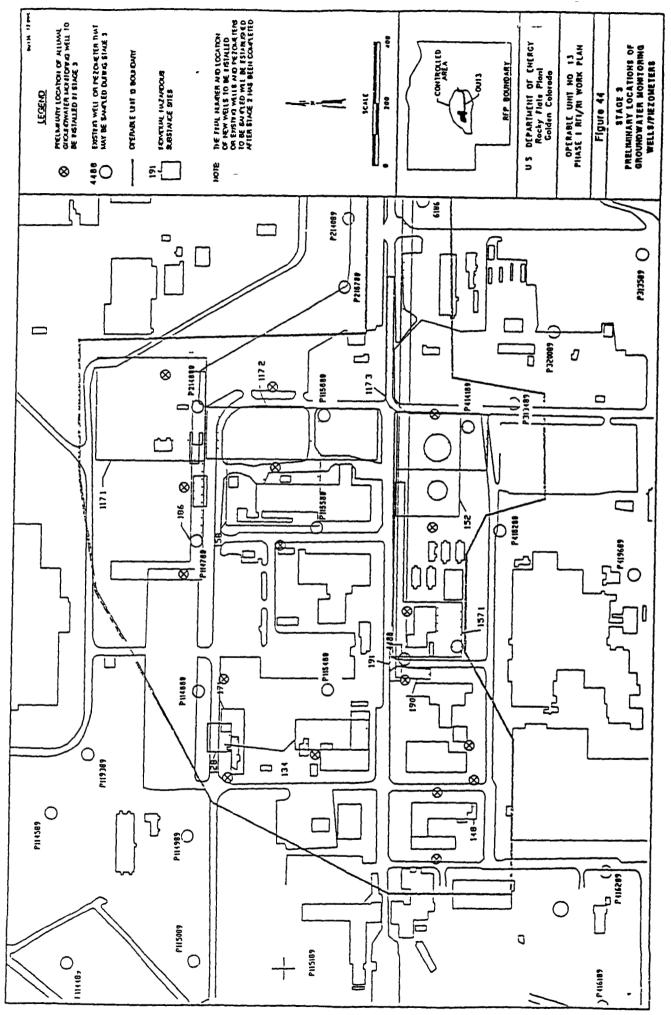
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